Preserving The Promise of The E-mail Marketplace:

An Economic Assessment of The Proposed Federal **DO-NOT-E-Mail** Registry

Peter A. Johnson, Ph.D.

Director and Senior Economist, Strategic Information Unit

DNE COSTS AND BENEFITS AT A GLANCE...	
E-MAIL MARKETPLACE... ...BEFORE DNE REGISTRY...	
Number of US Adult E-mail Buyers	**33,022,000**
Average Purchase Price	**$158**
Average Yearly Purchase Frequency	**6.4**
Yearly Value of E-mail Driven Sales	**$33,391,846,400**
Of which: Small Businesses	**$8,014,043,136**
Yearly Consumer Savings From E-mail Purchases	**$6,885,483,264**
...AFTER DNE REGISTRY	
Estimated BENEFITS From DNE List (Type 1):	
True Spam Blocked	**NONE**
LCE Blocked	**21,347,474,747**
Total Minutes Saved	**355,791,246**
Minutes Saved/person/yr	**2.28 min/yr**
Average Wage/Salary per hour	**$15.23**
Total Economic Benefit	**$90,282,029**
Estimated COSTS From DNE List (Type 1):	
Net Revenue Loss: Medium & Large Businesses	**$1,749,241,384**
Net Revenue Loss: Small Businesses	**$3,967,179,024**
Sub-total: Total Net Revenue Loss	**$5,772,984,044**
Compliance Costs -- FTC fees*	**$56,563,636**
Lost Consumer Savings	**$6,885,483,264**
Total Economic Costs	**$12,658,467,308**
NET COST TO US ECONOMY OF DNE REGISTRY	***-$12,568,185,279***

*Assuming some e-mail marketing

I. INTRODUCTION

With all the attention devoted to the tide of "spam" inundating the computers of America's Internet users, it has been all too easy to overlook the rapidly growing marketplace of valuable commercial transactions generated by legitimate commercial e-mail (LCE). [1] E-mails solicited by consumers and unsolicited e-mails sent by legitimate businesses to potential customers are regarded by American consumers in a very different light from the fraudulent, deceptive, and often pornographic spam messages that vastly outnumber them.

Although only recently the subject of economic research, legitimate commercial e-mail messages already generate tens of billions of dollars in revenue for American businesses in aggregate, inspire tens of millions of American consumers to make hundreds of millions of purchases per year in aggregate, and yield billions of dollars in savings to these consumers overall.

As such, the infant but rapidly growing e-mail marketplace represents the next important stage in the maturation of the Internet as an important new engine driving increased efficiency in the American economy as a whole.

Now, however, such has been the media outcry and popular disgruntlement over the proliferation of fraudulent, deceptive, and pornographic commercial solicitations -- apparently sent by no more than a few hundred criminal spam "gangs" worldwide -- that Congress has directed the Federal Trade Commission to evaluate a nationwide "Do Not E-mail" (DNE) Registry. The stated purpose of such a registry is to allow consumers to control unwanted e-mail solicitations in a manner similar in spirit to the recently instituted National Do Not Call (DNC) Registry.[2]

But will a National Do Not E-mail Registry work? And, if one were instituted, what would the economic impact of such a DNE registry be? Would the costs imposed by such a program on consumers, businesses, and taxpayers in America be more than offset by economic or social benefits to Americans or the American economy?

The evidence presented in this paper shows that for the two most likely approaches to implementing the registry as currently envisioned under the CAN-SPAM Act, the costs would be significant and far outweigh any measurable benefits. Evidence with previous efforts to limit spam suggest convincingly that without prohibitively costly enforcement, the likelihood that hard-core spammers would "scrub" their marketing lists against the registry is almost wholly non-existent.[3] This being the case, only legitimate commercial

[1] I would like to thank Lee Johnson, Larry Buc, Jordan Cohen, Ann Zeller, Anna Chernis, Richard Spector, Louis Mastria, Jerry Cerasale and Doug Berger for their generous assistance with the preparation of this white paper.

[2] The recently enacted CAN-SPAM Act requires that the Federal Trade Commission to report on the feasibility of a national "Do Not E-mail" (DNE) Registry by June 16, 2004. This DMA white paper is a contribution to their investigation.

[3] As discussed below, technological differences between the telephone and Internet networks make it disproportionately easier for law-breakers to disguise their true identity and location while mailing

e-mailers -- for the most part, mainstream American firms, large and small, that depend on their reputation in the marketplace to maintain customer loyalty -- will comply with the law.

Given this assumption, this paper shows that the principal -- and vastly disproportionate -- economic effect of the DNE registry will be to unplug an important incubator of economic growth. In what follows, we deliberately emphasize the image of infant industries: the evidence presented below, derived from both consumer and industry research, confirms that commercial e-mail has already established itself as an important nursery of small businesses in particular.

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One of the most important issues in generating new growth and efficiencies for an economy is lowering the barriers to entry for new firms. New firms increase competition that drives down prices for consumers and accelerates the introduction of productivity-enhancing products and procedures. Legitimate commercial e-mail is uniquely positioned to reduce barriers to entry because of its low per-contact cost (making it flexible enough for small marketing campaigns) and because of its disproportionately high return on investment per contact, which facilitates rapid customer acquisition -- i.e., rapid business growth.

This paper will calculate the current size of the e-mail marketplace using primary and secondary research on consumer response to, and industry use of, legitimate commercial e-mail in the online marketplace. This calculation will identify the number of Americans and/or Internet users who have made one or more purchases from a legitimate marketer within the past 12 months in response to an advertising e-mail they received; the average dollar value of such purchases (for both solicited and unsolicited e-mail); the average frequency of such purchases (for both solicited and unsolicited e-mail); and the average savings rate consumers attribute to such purchases.

As discussed below, technological differences between the telephone and Internet networks make it disproportionately easier for law-breakers to disguise their true identity and location while e-mailing inexpensively.

Having established the general size and scope of the national e-mail marketplace, this paper will then estimate the percentage of current e-mail customers (those who have purchased goods or services via e-mail solicitations within the last 12 months) who will be put beyond reach of legitimate e-mail marketers by the introduction of a DNE registry. This is only in part a matter of calculating a probable take-up rate for the

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inexpensively. The reverse is the case for telephone: it is costly, and the origin of a telephone call is easy to trace. Consequently, the experience of a National Do Not Call Registry provides no meaningful precedent for the present situation.

registry among Internet users.[4] It is also a question of the specific technical operation of the registry, and the attendant direct or indirect costs imposed on or incurred by legitimate e-mail marketers; its diminution of their ability to measure response rates and target efficiently; and the climate of consumer expectations created by the registry.

The Federal Trade Commission is investigating the feasibility of four different implementation strategies, and each of them will affect the usage of e-mail marketing to different degrees. However, since we cannot know their precise details until they have been codified into legislation and regulations, we must rely on hypothetical typologies for purposes of economic analysis.

As explained below, this paper quantifies the impact of two types of DNE list in a post-DNE world:

Type 1: The DNE registry directly or indirectly puts all e-mail users beyond the reach of LCE and makes commercial e-mail non-viable for all legitimate marketers;

Type 2: The DNE registry puts some e-mail users beyond reach while leaving some available to be marketed to by legitimate marketers.

…Non-compliance with the DNE registry by criminal spammers will essentially continue as currently appears to be the case, barring enhanced enforcement expenditures by Federal authorities.

Under both of these scenarios, non-compliance with the DNE registry by criminal spammers will essentially continue as currently appears to be the case, barring enhanced enforcement expenditures by Federal authorities. *In fact, elimination of LCE by a DNE registry may (ironically) increase response rates for illegal spam -- and thus create economic incentives for illegitimate spammers to send more of it.*

To calculate the costs of the second scenario, it is first necessary to estimate the likelihood that e-mail users (and especially customers) will register their e-mail accounts with the national DNE list. The next step will be to assess the likely compliance rate for senders of commercial e-mail, based on experience with existing anti-spam laws and costs and incentives involved for potential senders, given the four implementation scenarios under investigation by the Federal Trade Commission.

The intersection of the recipient sign-up rate with probable compliance rates among senders of commercial e-mail allows a provisional assessment of the likely impact a DNE list would have in reduced consumer savings opportunities and the increased marketing costs incurred by businesses engaged in legitimate marketing to both consumers and businesses.

In this regard, special attention will be paid to costs imposed on small businesses, as the uniquely low marketing costs and efficiencies associated with legitimate commercial

[4] Importantly, the DNE Registry would not be able to distinguish consumer e-mail addresses from commercial or business e-addresses.

e-mail help reduce barriers to entry into the economy for start-up firms and is particularly conducive to building an in-house customer base rapidly and efficiently for start-ups.

II. MEASURING THE E-MAIL MARKETPLACE

A. Definitions and Methodology: SPAM vs. Legitimate Commercial E-mail (LCE)

Most industry analysts and experts, government officials, consumers, and activist groups have long struggled to define spam.[5] The growing problem of so-called "false positives", i.e., messages welcomed by the recipient but misidentified as spam by ISPs and blocked by their filters is an important indicator of how ambiguous and problematic this definition is. (As many as 70% of survey respondents in a recent study indicated that e-mail they were expecting to receive was either delayed or filtered out altogether.)[6]

False Positives: As many as 70% of survey respondents in a recent study indicated that mail they were expecting to receive was either delayed or filtered out altogether.

Thus, not just spam, but the problem of distinguishing spam from other, legitimate forms of communication (including legitimate commercial e-mail) is a challenging issue confronting the Internet, because a network that is degraded not just by an increasing noise to signal ratio (spam diluting real messages) but also by positive interference by carriers (spam blocking of real messages) diminishes the network's positive externalities.[7]

With the passage of the Federal CAN-SPAM Act, however, governments, ISPs, consumers, and marketers can now in principle distinguish between "Legitimate Commercial E-mail" (LCE) that is sent consistent with the requirements of federal legislation[8] and true "spam", which does not bear the attributes stipulated in the new legislation. While the former is sent by legitimate marketers, the latter is typically the

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[5] The 2003 Pew Survey sampled Americans' common definitions, and found that they were highly variable.

[6] ePrivacy Group and Ponemon Institute, "2003 Consumer Spam Study (Executive Summary)," p. 2 The definition of spam as "Unsolicited Commercial E-mail" used by ISPs to filter e-mail traffic is flawed, since it purports to measure subjective characteristics ("solicited"-ness, or lack thereof) that in fact ISPs' filtering software cannot observe. Instead, ISPs and spam-blocking service providers can only filter for, and block, indicators that serve as proxies for these attributes, such as pornographic language, the quantity of the e-mail, and so on -- hence the high false positive rate.

[7] Positive network externalities means that the benefit of belonging to a network increase disproportionately to the number of participants who are members; a network with just one individual can make no connections (counting only paired dyads); a network with two permits one dyad; but with three individuals, there are three possible dyads, with four individuals there are now six possible dyads, with five there are now ten, and so on.

[8] The legislation is still subject to a certain degree of interpretation in its early months of implementation. Generally speaking however, the act criminalizes e-mail soliciting the purchase of a good or service if it falsifies or disguises the sender's true identity or uses a misleading subject line. Furthermore, businesses are not permitted to market themselves through false or misleading e-mails, and a true return e-mail and postal address must be provided, along with a means to opt-out of receipt of further e-mails. There must also be conspicuous notice that an e-mail is a solicitation or advertisement, and sexually oriented materials must be plainly labeled as such. If in violating these rules, senders in addition improperly harvest e-mail addresses, or use automated systems to generate electronic addresses by combining names, letters and numbers (so called "dictionary attacks") this may be subject to additional severe penalties.

fraudulent get-rich-quick schemes, the deceptive offers for quack remedies, or the links to pornographic Web sites that masquerade as more innocuous products until an unsuspecting recipient (potentially a minor) clicks on it and discovers otherwise.

A number of private sector firms have made efforts to track the amount of spam flowing through the nation's Internet system. Most of these measurements have not yet begun to distinguish between the true spam and the legitimate commercial e-mail that trigger consumers' purchases. Nevertheless, there are some initial indications from Internet Service Providers and others that the vast majority of the unwanted e-mail falls into the category of true spam, principally fraud and pornography, since it contains falsified routing or header information. America Online has testified in government hearings that as much as 90% of spam messages contain falsified header or routing information.[9] The remainder we may infer is legitimate commercial or personal e-mail, some of which is unfortunately being ensnared inappropriately as "false positives."

In this white paper we will be primarily concerned with measuring the economic value of legitimate commercial e-mail or LCE. In legal terms, LCE will be understood as commercial or advertising solicitations that would withstand scrutiny under the CAN-SPAM Act. For purposes of economic analysis, however, this paper operationalizes LCE to mean e-mail advertisements that consumers regard as legitimate, coming from marketers advertising real goods and services such as travel, hotel accommodations, books, CDs, financial services, and the like.

B. How Much Do Consumers Spend In Response To Legitimate Commercial E-Mail?

Because sales in response to advertising e-mails are a relatively new phenomenon, there is no standard methodology or data source that unambiguously captures the size and nature of this marketplace. The sections below provide two alternative perspectives. Both of these different measures agree, however, that the e-mail marketplace is large and growing rapidly.

Unfortunately, the federal statistical agencies have not yet begun to measure the size of the e-mail marketplace directly. Currently, the US Census Bureau still measures only the far broader category of "e-commerce," which encompasses not only Internet sales (of which e-mail-driven sales are a subset), but the vastly larger realm of sales sourced via Electronic Data Interchange (EDI), which are private electronic networks used by businesses to manage their supply chains, and which currently account for fully 88% of all e-commerce transactions by dollar value as defined by the Census Bureau.

Ascertaining the extent of sales driven by e-mail using government data is, therefore, no easy task, nor does the calculation lend itself to very precise results. It is first necessary to break out Internet sales from total e-commerce sales, and then estimate a

[9] Jennifer Carrol Archie of Latham & Watkins LLP, Washington, DC, on behalf of her client America Online, before the Pennsylvania State Senate Communications and Technology Committee, September 23, 2003.

percentage of Internet-sourced sales that may be accounted for by e-mail advertisements. Unfortunately, the government has not yet begun to collect data that would provide such estimates, and so they must be sourced externally.

Even if estimates of e-mail percentages of total e-commerce or Internet sales were available, however, a further note of caution would need to be raised before they could be used. Census Bureau methodology, unlike that employed in the direct marketing industry, classifies all e-commerce and/or Internet sales with reference to the channel by which the ownership of the good or service was transferred, not with reference to the advertising medium that triggered (in the language of direct marketing: “drove”) the sale. This makes an enormous difference in the observed level of commerce transpiring in each channel, with an almost certain reporting bias downwards to the prejudice of all outbound marketing channels, of which e-mail marketing is one.

For example, suppose an Internet user receives an e-mail advertisement promoting a weekend travel deal that leads her to visit an airline’s Web site. If she then purchases the flight online, the Census Bureau will classify this as a pure “Internet” sale, not an e-mail sale, even though from the marketer’s viewpoint the mechanism that was primarily responsible for the sale was the original e-mail advertisement. An even more pronounced measurement error occurs when the channel of title transfer does not involve the Internet at all. To take an example from the B-to-B marketplace, if a business manager receives an e-mail from her wholesaler announcing a new line of products, and then places an order for those products by calling an 800 number, then the purchase will be recorded by the Census Bureau as neither an e-mail sale nor an e-commerce sale but as wholly “offline”, even though once again, from the marketer’s point of view, the impetus for the sale came from the original legitimate commercial e-mail.

Given the significant limitations of current federal data sources, the principal alternative approach, and the one this paper employs for measuring the size of the e-mail marketplace, is independent third-party consumer survey research. While this approach measures only LCE marketing in the B-to-C marketplace, it is this marketplace with which the general public is probably most concerned.

The next section reports the results of the most recent data on e-mail driven sales, first as reported directly by consumers, and second, for comparison purposes, as derived from broader US Census Bureau data. In the subsequent sections of this paper, only consumer self-reported data will be used for the economic calculations.

Self-Reported Consumer Data

When asked in March 2004 by an independent polling organization in a nationwide, statistically projectible survey, some 15.8% of adult American consumers acknowledged buying one or more products or services in response to a legitimate commercial e-mail solicitation, whether solicited or unsolicited. This translates into over 33 million adult Americans.

These consumers made an average of 6.4 such purchases, comprising about 5.2 purchases in response to a solicited e-mail, and 1.2 purchases in response to an unsolicited e-mail over the previous 12-month period. When projected to the entire US economy, this calculation reveals that over 211 million purchases were made in response to legitimate commercial e-mail, purchases with a total value in excess of $33 billion.

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Table 1: VALUE OF CONSUMER COMMERCIAL E-MAIL PURCHASES, MARCH 2004

	COMMERCIAL E-MAIL TYPE		
	All	**Solicited**	**Unsolicited**
US Adult Population	**209,000,000**		
% of Adults Purchasing In Prior 12 Months In Response To Legitimate Commercial E-Mail Offer	**15.8%**		
Number Of Adults Purchasing In Prior 12 Months In Response To Legitimate Commercial E-Mail	**33,022,000**		
Average Price (Est. From Most Recent Purchase)	**$158**	**$166**	**$123**
Total Value Of Most Recent Purchase	**$5.2 billion**	**$4.23 billion**	**$.975 billion**
Average # Of Purchases By Type Of E-Mail	**6.4**	**5.2**	**1.2**
Total # Of Purchases Within Prior 12 Months	**211,340,800**	**171,714,400**	**39,626,400**
Total Expenditures On Purchases By Type Of E-Mail	**$33,391,846,400**	**$28,504,590,400**	**$4,874,047,200**
Average Percentage Saved Per Purchase	**17.1%**		
Average Amount Saved Per Purchase By Type Of E-Mail	**$32.58**	**$34.24**	**$25.37**
Total Amount Saved Per Purchase By Type Of E-Mail	**$1,075,856,760**	**$874,133,617**	**$201,723,142**
Total Amount Saved Within Prior 12 Months	**$6,885,483,264**	**$5,879,716,476**	**$1,005,382,474**

US Government Data

Based on US Census Bureau data for total e-commerce from 2003, DMA research estimates that already some 14% of the $138 billion Internet commerce marketplace for 2003 was driven by commercial e-mail. This translates into an excess of $19 billion

spent in response to commercial e-mails in 2003. Again however, it is important to bear in mind that the Census Bureau E-Stats program has not yet released its first measurements on the value of e-commerce in the vitally important services sector. Since these purchases include many airline tickets and other forms of travel, hotel accommodation and car rentals, etc., that although initiated by an e-mail advertisement, may have been purchased via 800 number and thus not be categorized as e-commerce by the Census Bureau, it is likely this figure significantly understates the true impact of e-mail marketing.

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Table 2: VALUE OF INTERNET AND COMMERCIAL E-MAIL SALES FOR 2003

	2003 Estimate
US Internet Commerce (1)* ($ Billions)	**$ 138.2**
E-mail Sales as % Interactive Sales (2)	**14%**
Value of E-mail Sales ($ Billions)	**$ 19.34**

(SOURCE: (1) US CENSUS BUREAU;
(2) 2002 DMA STATE OF E-COMMERCE INDUSTRY REPORT)
*Does NOT include value of Internet commerce from services.

III. IMPLEMENTING THE DNE REGISTRY

A. Four Approaches, Two Economic Effects

The FTC is investigating four alternative approaches to implementing the DNE registry. This paper assumes that their economic effects can be typologized and their economic impact measured according to the amount of the e-mail marketplace that would remain available to legitimate e-mail marketers after implementation. Two of the four approaches under consideration ("Type 1") would in effect, if not in intent, place the entire e-mail marketplace beyond reach of LCE; the remaining two approaches ("Type 2") would likely permit legitimate e-mail marketing to potential e-mail customers who do not place their e-mail addresses on the registry.

Importantly, however, even modest adjustment in implementation assumptions -- such as increases in fees for purging e-mail-marketing lists -- would essentially put one or the other of the "partial" approaches squarely in the camp of the complete denial of market approaches.

Furthermore, in what follows, it is assumed that there will be neither an exemption for established business relationships (EBR), nor will there be an exemption for B-to-B marketing, even though, as discussed above, the research on the size of the e-mail marketplace here directly measures ONLY B-to-C purchases. Any final determination of the impact of a DNE registry would need to include an additional calculation of the further impact on B-to-B e-mail-driven sales.

The following section explains the classification of the four proposed approaches to implementing a DNE registry into two types, based on their probable effect on the size of the post-registry marketplace. Note that the primary determinants of this effect is less price charged to marketers (although this could, under some scenarios, be the determining factor) than who is authorized to place e-mail addresses on the list, and whether the e-mail registry permits measurement of consumer response to the marketing effort.

Type 1: No Legitimate Commercial E-mail

1. Domain-wide Registry.

By this arrangement, and contrary to the practice of the National Do Not Call Registry which allows only individuals to place their home phone numbers on the list, ISPs would be authorized to put their entire clientele on the registry. In all likelihood, this would essentially eliminate all but the most minimal legitimate e-mail marketing, including e-mails deemed "solicited" by the individual consumer. ISPs that did not place their entire clienteles on the registry would likely be at a competitive disadvantage, and so the dynamics of the ISP market would probably drive all consumer e-mail addresses onto the registry. Leaving decision-making over the size and scope of e-mail marketplace in the hands of private sector actors would amount to an implicit anti-competitive grant of

market authority to private network gatekeepers. Nevertheless, as with all four approaches, this strategy would not secure compliance from hard-core spammers; ISPs and consumers would continue to receive vast quantities of the fraud and porn they mostly regard as spam.

2. Third-party Forwarding

Under this plan, individuals would place their e-mail addresses on the registry. However, private sector firms would "scrub" marketing lists and would then forward LCE to the remaining (non-scrubbed) e-mail addresses that had not been placed on the registry. Legitimate marketers would not be informed which names on their lists had been purged due to the DNE registry. The ability to measure response and efficiently target customers and prospects -- the essence of direct marketing -- would essentially be precluded. And, with this approach as with all other approaches being considered, third-party forwarding would not secure compliance from hard-core spammers. ISPs and consumers would therefore continue to receive fraud and porn (true spam) in unabated quantities.

Type 2: Restricted Legitimate Commercial E-mail Marketing

3. National Registry

Similar in approach to the existing Do Not Call Registry maintained by the Federal Trade Commission, there would be a master database on which individuals could place their e-mail addresses. It would have issues of security, verifiability, and unwieldiness (e-mail addresses proliferate much faster than telephone numbers). It would probably lack, given the language of the CAN-SPAM Act, an Established Business Relationship (EBR) exemption and, if there were no prohibitions against placing business e-mail addresses on the registry, (as there likely would not be) would likely restrict B-to-B e-mail marketing also.

Nevertheless, if the administrative fees were set low enough, this approach would not *ipso facto* eliminate the entire e-mail marketplace for LCE, though it would substantially increase barriers to entry, as discussed below. E-mail marketing would be limited to LCE sent to those e-mail addresses not placed by individuals on the registry. And once again, lack of compliance by hard-core spammers means that all e-mail users, whether on the DNE registry or not, would continue to receive spam in undiminished volumes from the usual suspects.

4. Verified Sender

This is a so-called "gold list" approach, and the private sector is already vigorously exploring how this might work. While this approach currently has the greatest potential to reduce spam while permitting LCE to reach recipients who are willing to receive it, it

is far from clear that this approach is sufficiently developed or understood by the private sector for it to be ripe for adoption by government agencies.

B. Which Businesses Will Comply?

An important consideration in assessing costs and benefits of any public policy that seeks to alter private behavior is the question of probable compliance rates, and the question of supplemental enforcement costs to regulatory authorities if the policy cannot be assumed to be essentially self-executing.

In the calculations that follow, it is assumed, for the reasons given below, that compliance by true "hard-core" spammers will be zero, while compliance by senders of LCE (legitimate marketers) will be at or close to 100%.

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While the precedent of the National Do Not Call Registry, hailed by the Federal Trade Commission for its "exceptional compliance" by telemarketers, provides guidance to the probable compliance rate of a Do Not E-mail registry by *legitimate marketers*, it offers no precedent for compliance by *illegitimate marketers*, the so-called "bad actors" who are responsible for the overwhelming bulk of messages identified with the spam problem.

The do-not-call registry is effective because the overwhelming majority of the calls are made by legitimate businesses that follow the law and do not call telephone numbers placed on the list. Apart from the fact that telephone solicitation has been long practiced by highly reputable local, regional, and national firms, the costs of conducting telephone solicitation were among the highest in the direct marketing industry. Fly-by-night operators generally could not, and cannot, afford to compete in this marketplace given these cost structures.

Most crucially, perhaps, the technology involved in telephony is radically different from that of e-mail. Every telephone call that is made carries with it a unique signal that can be traced to identify its origin. Consequently, it is a comparatively straightforward matter -- relative to tracking spammers -- for enforcement authorities to identify, locate, and ultimately prosecute and convict any law-breakers. Although the national do not call list imposed a very heavy burden on the nation's industries that relied upon telephone marketing to maintain their customer base, the implementation of the DNC list was at least a practicable matter in principle.

The fundamentals of e-mail are completely otherwise. Because of the extraordinarily low costs involved, it is estimated by leading watch-dog groups that as much as 90 percent of spam may be sent by elusive, illegitimate entities. According to Europe's leading spam-fighting organization *Spamhaus*, fewer than 200 so-called "spam gangs" –

professional, chronic spammers using aggressive, fraudulent and deceptive tactics – are responsible for 90 percent of all spam in North America and Europe.[10]

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These groups have so far proven notoriously difficult to identify, track, prosecute and convict. Federal, state, and local authorities, together with some of the most technologically sophisticated companies in the world -- Microsoft, AOL, and others -- have spent years seeking out these Internet miscreants, with no discernible impact on the level of spam to date. Almost inevitably, once the source of spam has been traced to a particular computer or link to an ISP, the spammer has folded up operations and moved elsewhere -- increasingly, overseas, beyond the reach of American law enforcement.

The reason for such difficulties is the nature of the Internet itself. Its "open architecture" allows spammers to exploit open proxies and other deceptive methods to permanently obliterate their true identities in violation of multiple anti-spam and fraud statutes. *The Washington Post* has reported that nearly two-thirds of all spam on the Internet today is sent through computers running software relays – a process where spammers exploit weaknesses in network security to blast out huge amounts of spam while concealing their identities in the process.[11]

Thus the conjunction of economic incentives, low barriers to entry and technological advantages give these criminal fly-by-night operators every incentive to stay in business, and no incentive whatsoever to use a DNE registry were one to be implemented. Even if the government finds a way to implement a registry that overcomes the myriad technological obstacles in its path, it would be naïve to think that spammers are going to obey it.

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C. What Is The Probable Registry Take-Up Rate By Consumers?

Issues and Considerations

The DNE registry take-up rate matters for several reasons. First, if the experience of the DNC registry is a valid precedent, there is likely to be some sort of charge levied by whoever administers the list. This charge is likely to reflect the number of e-mail addresses that must be handled when marketers' lists are "scrubbed" against it.

[10] "200 Known Spam Operations Responsible For 90% Of Your Spam" See: http://www.spamhaus.org/rokso/index.lasso

[11] Brian Krebs, "Online Financial Crime Headed From Bad to Worse," Washington Post.com, December 17, 2003

In addition, for all the Type 2 approaches -- those that do not simply prohibit all e-mail marketing, but permit e-mail marketing to that portion of e-mail customers who do not place their e-mail addresses on the registry -- it is also necessary to estimate the probable take-up rate among the eligible population as this will ultimately affect the number of potential customers lost or preserved (more about this below.)

Again, for the purposes of this white paper, it is assumed, given the absence of any references to exemptions for B-to-B marketing in the CAN-SPAM Act, that eligible e-mail addresses will include those acquired through one's business or employer.

A further important consideration for the Type 2 approaches to implementing the DNE list is the size of the registry against which e-mail marketing lists must be purged. E-mail addresses have virtually zero marginal cost to create. Unlike the telephone registry for consumers, where at any given time there are a relatively fixed and slow-growing number of landlines that can be registered (as consumers move residences, they typically give up their former phone numbers as they acquire new ones; moreover, the cost of incremental telephone numbers is relatively high compared to e-mail addresses), ISPs and other industry professionals encourage consumers to protect themselves against identity theft and other scams through the use of multiple e-mail addresses.

As can be seen, under at least several of the hypotheses outlined below, the DNE registry could well be overwhelmingly large. Combined with the fact that e-mail addresses are not organized by geographic area (except at the highest level, the country suffix outside the United States) marketers will be required to purge their marketing campaigns -- however small -- against the entire e-mail list.

Possible And Probable Registry Take-Up Rates

There is no firm basis on which to form a likely estimate for how many consumers would actually place one or more e-mail addresses on the list, nor what they would hope to gain from doing so. The take-up rate could range from exceptionally low to exceptionally high. At the low end of the spectrum, the take-up rate could well be at or near zero, if Americans heed the repeated warnings of many experts in the field that the DNE registry would be either ineffective or a potential security risk for hackers (sometimes called crackers) and virus-spreaders. FTC Chairman Timothy Muris has gone on record advising Americans to NOT put their names on such a registry, should Congress mandate its creation.[12] With even the chief administrator warning against its use, there might be very few e-mail addresses on it.

At the other end of the spectrum, the public might regard the cost of putting their e-mail addresses on the list near zero (assuming registration took place by e-mail, required no fee, and was perceived to be secure, and so on), and so the registry might acquire tens or even hundreds of millions of e-mail addresses, even if consumers did not expect it to work. This might occur even if consumers enjoyed receiving LCE, and bought in response to it. In this case they might not realize that by placing their addresses on the

[12] See http://www.ftc.gov/opa/2003/08/aspenspeech.htm

registry they would be blocking LCE, or their attitude might be: it doesn't cost anything to try, so why not?

Ultimately, however, there is no clear consensus regarding the total number of e-mail addresses in the United States, nor even the average number of e-mail addresses per Internet user. In the following sub-sections, we identify some possible precedents or bases for gauging both the total and average numbers of e-mail addresses that constitute the maximum universe of e-mail addresses that exist, and the proportion of these that might potentially be placed on a DNE registry. These hypothetical scenarios are as follows:

1. Precedent of Federal DNC Registry

The FTC reports that as of March 2004, there were approximately 58 million telephone numbers on the National Do Not Call list. Assuming 112 million residential access lines[13] and perhaps 3 million duplicate or incorrectly listed telephone numbers on the registry, this amounts to 47% of the universe of applicable numbers placed on the registry. Assuming a comparable take-up rate among 242,440,000 estimated applicable e-mail addresses, the equivalent number would be approximately 114 million e-mail addresses placed on a national DNE registry.

Table 3: POTENTIAL DNE LIST TAKE-UP RATE FROM DNC REGISTRY PRECEDENT

		US Adult Population	Take-Up Rate DNC Precedent
			47%
		209,000,000	99,094,828
	Percent with E-mail at:	**Est. Adults**	**Est. E-mail Accounts**
Home	66%	137,940,000	65,402,586
Work	34%	71,060,000	33,692,241
School	9%	18,810,000	8,918,534
Other	7%	14,630,000	6,936,638
Total		**242,440,000**	**114,950,000**

(Assumes one e-mail address per person per location; actual number of e-mail addresses per person is likely greater.)

2. Domain-wide Registry

Another potential scenario regarding take-up rate for the DNE registry involves the possibility that ISPs may be authorized to put all their members' e-mail addresses on the list. Under this approach, the DNE registry could become quite large very quickly, even if *only* the five largest consumer ISPs put their entire customer base on the list, and all businesses with their own in-house domains mandated their IT departments to place their employees' business domain addresses on the registry.

[13] US Census Bureau, *2003 Statistical Abstract of the United States*, p. 732.

Table 4: POTENTIAL DOMAIN-WIDE DNE REGISTRY TAKE-UP RATE

		E-mail Addresses	Average Addresses/User
Personal E-mail Address Holders	**100%**	**137,940,000**	**1.48***
Of Which*: AOL	27%	37,243,800	55,208,456
Yahoo	16%	22,070,400	32,716,122
Hotmail	11%	15,173,400	22,492,334
MSN	10%	13,794,000	20,447,576
Earthlink/Mindspring	4%	5,517,600	8,179,031
Sub-Total (1) Consumer Domain	**(68%)**	**93,799,200**	**139,043,520**
Business Domain E-mail Addresses	**100%**	**33,692,241**	**1.3***
Sub-total (2) Business Domain			**43,799,913**
TOTAL			**182,843,433**

(*Source: Pew Survey, November 2003)

3. Public Opinion Surveys

A third and final approach to calculating a take-up rate is to rely upon the public's self-reported numbers of e-mail addresses they would place on the list. Here we take self-reported attitudes towards a DNE registry that did not deter hard-core spammers but did stop LCE, as revealed in the March 2004 DMA LCE consumer opinion survey.[14] Those favoring such a registry even under these flawed circumstances, it might be reasonably inferred, are the most likely to place their e-mail addresses on the list, while those opposed would not. With an expressed average of 2.9 e-mail addresses per person supporting the DNE registry under this scenario, this translates into a potential 172 million e-mail addresses on the list.

Table 5: POTENTIAL DNE TAKE-UP RATE FROM ATTITUDES TOWARDS DNE LIST

	Internet Users	Favor DNE	E-mail Addresses
Percent/Average	74.7%	38.0%	2.9
Total	156,750,000	59,565,000	172,738,500

It is probable that this number represents something like an upper bound, as respondents in this survey were specifically not asked to include personal e-mail accounts only; it is therefore probable that when asked respondents included business, school and other non-residential accounts, together with e-mail accounts belonging to family members (such as children or teenagers) in their reported totals.

[14] Conducted on behalf of The DMA by ORC International of Princeton, New Jersey. The survey of over 1,000 American adults was conducted the weekend of March 13-14 and is accurate for the entire US adult population to within plus or minus 3 percentage points, 19 times out of 20.

IV. ESTIMATED BENEFITS

We can all sympathize with the political clamor to "do something" about spam. If it were possible to just wish away the torrent of scams, viruses, worms, and porn coursing through the Internet, spam would be gone in an instant since it conveys no benefit and much annoyance.

Unfortunately, the idea of a do-not-spam registry falls into the category of wishful thinking. Given the technological near-certainty (as discussed below) that a National Do Not E-Mail Registry would do nothing to stop pornography and fraud, it is necessary to assess the benefits and costs of such a registry not as we might wish it to be in a perfect world, but as it is likely to be under a realistic assessment of prevailing technological and economic conditions. These realities make it difficult, to say the least, to ascertain with any certainty what the benefits of such a registry might be.

Given the technological near-certainty (as discussed below) that a national Do-Not-Email registry would do nothing to stop pornography and fraud, it is necessary to assess the benefits and costs of such a registry...

The major "problem" -- although the term "annoyance" might be more accurate here -- to e-mail users is a hard-to-measure and highly variable amount of message clutter in their e-mail inboxes. Most people simply ignore these unwanted messages anyway, selecting them for deletion only, an operation that takes mere seconds per day. The annoyance or distraction caused by e-mail treated in this way is therefore no more burdensome than is the magazine advertisement a reader's eye skips over while reading about her favorite sports team, or the "30% off" signs in shop windows a pedestrian strolling through the business district of his city might pass.

Even supposing, for the sake of argument, that such a list might deter some criminal spammers, there is little to be gained for consumers from blocking the small amount of commercial e-mail consumers receive. Nonetheless, it might be debatable whether a registry that truly and reliably eliminated this annoyance, however trivial, might be an effective use of Federal enforcement dollars (likely to run into millions of dollars) given the costs (discussed below) to be imposed on consumers and businesses alike.

But given the complete lack of compliance with anti-spam laws to date, and the complete failure of its proponents to offer any persuasive evidence that it would work, the DNE registry is certainly NOT going to work as intended. The merits of a DNE registry that does not stop its main intended target -- fraud and porn -- but hurts, as an innocent bystander, the legitimate commercial e-mail sent from widely recognized, law-abiding marketers, and imposes disproportionate costs on taxpayers, marketers, and consumers in doing so, seem dubious at best.

A. Estimated Time and Dollar Savings

In the following table, the volume of sales reported by consumers in Table 1 (above) is used as a base to calculate the corresponding volume of LCE messages that must have been sent in order to realize that volume. Using the industry-wide average response rate for LCE as found in the 2003 DMA *Response Rate Study*, it can be seen that approximately 21 billion LCE were sent over the course of the preceding 12-month period to e-mail addresses through-out the U.S. Assuming 156 million adult American e-mail users, this translates into 136 LCE per user per year, or slightly more than ten per month per e-mail user on average. Assuming one second required to delete each LCE (and again, no illegitimate spammers scrubbing their lists against the registry) the cumulative gain in time for blocking all LCE under registries of Type 1 would be as follows:

Table 6: VOLUME OF LCE PER YEAR

March 2003 - March 2004 E-Mail Purchases	**211,340,000**
Response Rate (orders per contact)*	**0.99%**
Est. Total # LCE Sent	**21,347,474,747**
# of Adult Internet Users	**156,123,000**
# Advertising E-mails per Adult American/yr	**136.73**
Total Minutes Lost	**355,791,246**
Minutes Lost Per User/yr	**2.28 min/yr**
If Response Rate = 0.099%	**22.8 min/yr**
If Response Rate = 0.0099%	**228 min/yr**

At the industry wide response rates of 0.99% (less than one per hundred), American e-mail users might save up to two-and-a-half minutes per year through a national DNE registry. Even supposing, for a moment, that DMA survey respondents over-estimated their response rates by an order of magnitude (making the actual volumes of e-mail sent larger by a factor of 10, or a response rate of less than one per thousand), then the time savings would be about 23 minutes per e-mail user per year. At an incredibly low (and vastly unprofitable) response rate of less than one per 10,000, the total time savings per e-mail user would be still only 228 minutes per year -- less than a minute per day.

Some watchdog groups attempt to justify the creation of a national DNE registry by putting a dollar value on the time expenditure consumed by spam. If we were to use this approach with blocked LCE, we discover the following:

At a nation-wide mean wage/salary average of $609 per week[15] (or about $15 per hour) the *maximum economic benefit to the nation from not having to spend one second per each LCE received (for a total of 21.3 billion seconds for all adult American e-mail users) would be no more than about $90 million for the entire U.S. economy.* Nor would there be any meaningful reduction in load demand on ISPs or the Internet backbone given this miniscule reduction in total volumes achieved by any Type 1 registry.

[15] 2003 *Statistical Abstract of the United States*, p. 423

Is this a wise use of taxpayer money, especially if the registry will not reduce the volumes of true spam?

B. Do Americans Support a Do Not E-mail Registry?

American taxpayers themselves do not appear to believe that a national DNE registry is a worthwhile use of Federal government energies. In a nationwide poll of over 1,000 American adults aged 18 and over, the question was asked whether respondents would support the creation of a national do not e-mail list in the next two years, if such a list did not stop porn and fraud, but did stop advertising e-mail from legitimate marketers.

The results were as follows:

Table 7: PUBLIC OPINION REGARDING NATIONAL DO NOT E-MAIL REGISTRY

	Adult Americans…		…Support DNE List		…Oppose DNE	
Internet Users	75%	156,750,000	38%	59,565,000	59%	92,482,500
Non-Internet Users	25%	52,250,000	36%	18,810,000	39%	20,377,500
ALL RESPONDENTS	100%	209,000,000	37%	77,330,000	54%	112,860,000

As can be seen, a clear majority (54%) of adult Americans oppose the creation of a national DNE registry under these circumstances, while only 37% of the population supports it. When we ask the opinion of those who are online (who use the Internet at home, work, school, or elsewhere) the proportion of those opposed to the creation of a DNE list increases to 59%, with only 38% of Internet users supporting it. Furthermore, opposition to the DNE is highest among those with the most college education, the highest income, and in the younger generations that most actively use the Internet (18-25 and 25-34 yrs old.) Ironically, the ONLY individuals expressing disproportionate support for the National Do Not E-mail Registry were those who do not themselves use the Internet.

...the proportion of those opposed to the creation of a DNE list increases to 59%, with only 38% of Internet users supporting it.

Table 8:SHARE OF NON-INTERNET USERS AMONG

	...Supporters	...Opponents
Proportion of Non-Internet Users Among DNE...	**24%**	**18%**

Within the online community, focusing on those who buy and those who do not buy in response to legitimate commercial e-mail reveals even clearer opposition to the concept of a national DNE registry that does nothing to stop pornography and fraud but does inhibit the free flow of advertisements concerning timely or cost-saving offers. Fully 63% of all those who acknowledged buying one or more product or service from a

legitimate marketer within the previous 12 month period opposed the creation of a national DNE registry. This table shows almost twice as many e-mail shoppers opposing the registry as supporting it. In other words, those MOST familiar with LCE are those most strongly opposed to a National Do Not Email Registry. Even among those who are not yet part of the e-mail marketplace still oppose its creation by a wide margin, 52% to 38%.

Table 9:VIEWS OF DNE REGISTRY AMONG E-MAIL AND NON E-MAIL PURCHASERS

	Adult Americans…		…Support DNE		…Oppose DNE	
LCE Purchasers	16%	33,440,000	34%	11,369,600	63%	21,067,200
LCE Non-Purchasers	83%	173,470,000	38%	65,918,600	52%	90,204,400
ALL RESPONDENTS	100%	209,000,000	37%	77,330,000	54%	112,860,000

V. ESTIMATED DIRECT ECONOMIC COSTS

The first task in calculating the negative impact of any DNE registry is to estimate the diminution of the customer base under either of the two types implementation strategies.

To estimate the loss of sales, savings, and increased customer acquisition costs under either of the Type 1 approaches is a relatively straightforward matter. To ascertain the impact of the DNE registry under either of the Type 2 approaches, however, requires that we adjust the take-up rate for the registry among e-mail users generally to account for the proportion of e-mail marketplace participants (purchasers within the last 12 months) as these e-mail users are the future customers whose sales are most likely to be lost under Type 2 approaches.

Table 10: PERCENTAGE OF ADULT AMERICANS JOINING A NATIONAL DNE LIST

	Adult Americans…		...Joining DNE List		...Not Joining DNE List	
BUYERS	15.8%	33,022,000	12.4%	25,922,270	2.7%	5,646,762
NON-BUYERS	82.6%	172,634,000	46.8%	97,883,478	29.9%	62,493,508
Totals	100%	209,000,000	60.4%	126,236,000	32.7%	68,343,000

Thus, while respondents to our survey expressed considerable skepticism to the idea of a national DNE registry on its merits (a view that was especially strong among those with the most Internet usage) the same group also indicates that it might experiment with the use of such a list, even if they clearly do not believe it would work. Under these circumstances, the number of current e-mail buyers to be found on this list would be about 12% of the adult population.

However, a study issued last year has been cited by DNE registry proponents as a likely indicator of a possible take-up rate.[16] In the following sections, this study uses their data (74% of Americans said to support the DNE registry) as a possible indicator of loss to the LCE customer base. While this study is clearly at variance with the results reported in the DMA survey cited above, the assumptions allow for an estimate of the probable decline in the LCE marketplace were such a take-up rate reflective of e-mail buyers as a whole under either of the Type 2 scenarios.

A. Estimated Reduction in E-mail Customer Base

The most immediate consequence of the implementation of either of the two classes of DNE registry implementation strategy (Type 1 or Type 2) will be a dramatic reduction in sales (customer base) by this channel. While most but not all such sales can be

[16] ePrivacy Group and Ponemon Institue, "2003 Consumer Spam Study (Executive Summary)"

recouped to other channels, it needs to be borne in mind that such shifts will not be frictionless. Many companies either specialize in, or have substantial sunk costs in, e-mail marketing, and these will have to be written off with the elimination of all or most of the e-mail marketplace.

Moreover, some unknown percentage of customers can ONLY be reached by one direct marketing channel. When this channel is cut off, either directly through de facto blanket government prohibition via a Type 1 DNE registry, or indirectly through the institution of a DNE registry of Type 2 that the customer takes advantage of, these sales will be permanently lost. No amount of marketing via other channels can recoup these losses.

Even under the more flexible Type 2 scenarios, in which at least part of the e-mail customer base will remain available to be marketed to, there could be a significant diminution in economic activity.

In the following table, the take-up rate among all e-mail users is adjusted to reflect the proportion of e-mail customers in each category as per the 2003 study cited above. The average expenditure amount and purchase frequency between customers placing their addresses on the registry and those who do not do so is held constant in this scenario.

Table 11: DNE REGISTRY IMPACT ON LCE CUSTOMER BASE

	PURCHASERS (from ALL E-Mail Types)		
	All Purchasers	DNE Joiners	DNE Non-Joiners
US Adult Population	**209,000,000**	**74%**	**26%**
% of Adults Purchasing In Prior 12 Months In Response To Legitimate Commercial E-Mail Offer	**15.8%**	**11.7%**	**4.1%**
Number Of Adults Purchasing In Prior 12 Months In Response To Legitimate Commercial E-Mail	**33,022,000**	**24,436,280**	**8,585,720**
Average Cost (Est. From Most Recent Purchase)	**$158**		
Total Value Of Most Recent Purchase	**$5,217,476,000**	**$3,860,932,240**	**$1,356,543,760**
Average # Of Purchases By Type Of E-Mail	**6.4**		
Total # Of Purchases Within Prior 12 Months	**211,340,800**	**156,392,192**	**54,948,608**
Total Expenditures On Purchases By DNE Joiners and Non-Joiners	**$33,391,846,400**	**$24,709,966,336**	**$8,681,880,064**

B. Estimated Loss In Consumer Savings

One of the chief benefits of the low costs of legitimate e-mail marketing is its ability to enhance and accelerate the cost reductions in the US economy that have already begun thanks to the advent of the Internet. Not only do Internet Web sites permit a reduction in search costs, permitting markets to seek their most efficient equilibrium faster and over a wider market, but legitimate e-mail marketing can drive customers to

these Web sites even faster through targeted promotions (special deals and savings offers) than is the case for stand-alone Web sites.

Consequently, the introduction of a DNE registry of either types is likely to remove a considerable amount of downward price pressure that has helped the US economy enjoy one of its longest runs of stable price levels in living memory. It is probably no accident that price levels have been more stable during the Internet era -- and even declining in real terms in many sectors of the economy -- thanks to reduced search costs. E-mail marketing is currently emerging as the next logical extension of this Internet pricing revolution, and its premature conclusion could only be to the advantage of less economically competitive, established firms.

... the introduction of the DNE registry ... is likely to remove a considerable amount of downward price pressure that has helped the US economy enjoy one of its longest runs of stable price levels in living memory.

At a minimum, the Type 1 approach would eliminate approximately $6.8 billion in downward price pressure (reported savings from e-mail marketing) while a partial denial of market (Type 2) would likely eliminate at least $5 billion per year, leaving consumers to realize only a maximum of $1.2 billion under the most market-friendly implementation scenario for the DNE registry.

... a partial denial of market would likely eliminate at least $5 billion per year ...

Table 12: ESTIMATED LOSS IN CONSUMER SAVINGS

	PURCHASERS (from ALL E-Mail Types)		
	All Purchasers	DNE Joiners	DNE Non-Joiners
US Adult Population	**209,000,000**	**74%**	**26%**
Total Expenditures On Purchases	**$33,391,846,400**	**$28,504,590,400**	**$4,874,047,200**
Average Percentage Saved Per Purchase	**17.1%**		
Average Amount Saved Per Purchase By Type Of E-Mail	**$32.58**		
Total Amount Saved On Most Recent Purchase	**$1,075,856,760**	**$796,134,002**	**$279,722,758**
Total Amount Saved Within Prior 12 Months	**$6,885,483,264**	**$5,095,257,615**	**$1,790,225,649**

C. Estimated Loss in Economic Efficiency

1. Comparing Economic Efficiencies Across Marketing Channels

Apart from the loss to consumers from lost savings and purchase opportunities, the impact of the DNE will be felt in loss of economic efficiency as firms, large and small, are forced to adopt less efficient marketing channels than e-mail to maintain their existing level of sales (on which depends employment, taxation, and so on.)

E-mail is highly efficient. As can be seen from the following tables, when compared against all other channels employed by American businesses to reach customers directly, e-mail has the highest return on investment (ROI), and by a wide margin.

The tables on "Return on Investment" for the leading direct marketing channels are taken from the main industry sourcebook for these statistics, The DMA's *Response Rate Survey* (2003 edition). This sourcebook reports the most comprehensive and most recent marketing performance of the direct marketing industry as a whole, based on over 1,500 completed surveys from direct and interactive marketers from across the country, and is the most scientific basis for comparison among direct marketing channels.

Essentially, direct marketers calculate ROI using an index derived by calculating the ratio of revenues per contact to the cost of contacting these potential customers. Any number above 1 is efficient, and the higher the ROI index, the more efficient the channel is. Response rates measure the number of orders taken (typically one per customer) per campaign.

It is important to note that the figures for "revenue per contact" and for "promotion cost per contact" represent campaign averages, not marginal revenues or marginal costs. It is assumed that marketers will market using a given channel until the (approximate) point where the marginal revenues have diminished towards the marginal costs; the averages for revenue per contact and cost per contact are then compared retrospectively at the end of a marketing campaign (or are budgeted for prospectively, using the DMA's *Response Rate Study* as a guide.)

Since the B-to-C and B-to-B markets are so very different, ROI indices are calculated separately for the two. The ROI indices then allow a comparison of what a typical marketing campaign of average size might reasonably be expected to realize for that channel, recognizing that smaller, more targeted campaigns anticipate higher response rates and/or ROI, and larger campaigns may expect lower response rates and/or ROI, all other things constant.

As can be seen from the following table, the ROI index reported by direct marketers for e-mail campaigns is roughly 14, meaning that for every dollar spent on advertising via e-mail, approximately $14 was recouped in revenue. This figure is based on 137 reported campaigns, including campaigns to both customers and prospects (the direct marketing industry does not normally use the terms "solicited" and "unsolicited", since these are subjective terms, though they correspond to some degree.) The next highest ROI index is reported by campaigns using direct mail, at 7.2. Comparing these two index numbers reveals that e-mail is almost exactly twice as efficient, on average, as is the next most efficient channel, direct mail.

Table 13: B-2-C RETURN ON INVESTMENT BY MEDIUM

Media	Revenue Per Contact	Promotion Cost Per Contact	Response Rates (%)	ROI Index
Direct Mail	$3.95	$0.55	1.61	7.2
Dimensional Mail	$8.99	$1.61	3.46	5.6
Catalog	$2.88	$0.63	2.32	4.6
E-Mail	$1.28	$0.09	0.99	14.2
Inserts	$1.31	$0.18	1.46	7.3
Coupons	$1.32	$0.43	2.78	3.1
Telephone	$6.17	$1.45	5.73	4.2
Newspaper	$0.75	$0.35	0.14	2.1
Magazine	$0.10	$0.22	0.13	0.5
FSIs	$0.03	$0.06	0.09	0.6
DRTV	$1.35	$0.16	0.27	8.4
Radio	$3.77	$0.74	0.38	5.1

When we turn to the B-to-B marketplace, we find that ROI for legitimate commercial e-mail is once again at the very top of the efficiency scale, about twice as high as the next most efficient channel. Based on 109 survey responses, it was found that B-to-B marketing campaigns employing this channel returned, about $94 on average for every dollar spent. Although other channels, such as outbound telephone, yielded more dollars in absolute terms, they were not nearly as efficient when their much higher per-contact marketing cost was taken into consideration.

Table 14: B-2-B RETURN ON INVESTMENT BY MEDIUM

Media	Revenue Per Contact	Promotion Cost Per Contact	Response Rates (%)	ROI Index
Direct Mail	$34.79	$1.21	2.56	28.8
Dimensional Mail	$371.78	$13.30	4.25	28.0
Catalog	$9.33	$0.62	2.53	15.0
E-Mail	$19.82	$0.21	2.83	94.4
Inserts	$1.89	$0.80	1.42	2.4
Coupons	$1.39	$0.12	0.16	11.5
Telephone	$242.24	$4.43	7.08	54.7
Newspaper	$0.40	$0.09	0.26	4.4
Magazine	$12.45	$0.26	0.59	48.8
FSIs	$16.17	$0.83	1.83	19.4
DRTV	$0.52	$0.32	0.23	1.6
Radio	$1.54	$0.18	0.60	8.5

Together, the preceding two tables indicate why e-mail is widely regarded in the marketing industry as among the most important innovations of the last few decades, perhaps second only to the Internet itself in importance. Indeed, virtually every issue of the DMA's *Quarterly Business Review* has, since its inception in 2002, indicated that

increased investment in e-mail marketing was among the top investment priorities for direct marketing firms.[17]

2. Impact Of Loss Of Marketing Efficiency: All Firms

What difference would a drop in efficiency make to US commerce and industry if they were forced by a DNE registry to switch to marketing channels with lower ROI? Essentially, firms using direct marketing must choose between two strategies: maximizing a return on a fixed expenditure on marketing, or spending as much as is necessary to realize a fixed revenue goal. Depending on the strategy adopted, the shift from the most efficient marketing channel to the next most efficient channel will indicate either a lower or upper bound for the loss of efficiency as revealed by changes in net revenue to individual firms.

Generally speaking, we may suppose that small businesses and especially, start-ups, will be on fixed budgets, and will be attempting to maximize return and growth for a fixed marketing dollar. Large corporations, on the other hand, will have more or less fixed revenue targets, and greater flexibility to borrow or otherwise divert dollars to marketing expenditures to market as necessary to achieve their gross revenue targets.

Table 15 illustrates what the industry would experience if, under a Type 1 DNE list, they abandoned e-mail marketing altogether and went with a pure postal campaign for the B-to-C market. As can be seen, the shift to a postal mail campaign with the objective of maintaining gross revenue levels prevailing under the high ROI e-mail channel results in a near doubling of marketing cost, a 47% drop in expected customers, and a 7.4% drop in net revenues. The same ratios and percentages hold true for a registry of Type 2, though the customer base that would need to be recouped would be slightly smaller, as illustrated in table 17.

… the [potential]shift to a postal mail campaign with the objective of maintaining gross revenue levels prevailing under the high ROI email channel results in a near doubling of marketing cost, a 47% drop in expected customers, and a 7.4% drop in net revenues.

While this may not seem like a significant drop when expressed in percentage terms, it is important to bear in mind that net revenues shown here ONLY include marketing-related expenditure. They do NOT include the costs of goods sold, wages and salaries, benefits, overhead, plant and equipment, and all the other usual business expenditures. Given that net (pre-tax) profitability for large corporations engaged in direct marketing may already be at the 6 or 7% per annum level, a reduction in net revenues by this amount is not insignificant.

[17] DMA *Quarterly Business Review* (October 2002, February 2003, May 2003, August 2003, October 2003, February 2004)

Table 15: TYPE 1 DNE LIST IMPACT ON NET REVENUE: FIXED GROSS REVENUE TARGET

	Contacts	Gross Revenue	Marketing Cost*	Purchases	NET REVENUE
E-mail	26,087,380,000	**$33,391,846,400**	$2,347,864,200	258,265,062	$31,043,982,200
Postal Mail	8,453,632,000	**$33,391,846,400**	$4,649,497,600	136,103,475	$28,742,348,800
DIFFERENCE	**-17,633,748,000**	**$0**	**$2,301,633,400**	**-122,161,587**	**-$2,301,633,400**
% CHANGE	**-68%**	**0%**	**98%**	**-47%**	**-7.41%**

*Does NOT include other variable and fixed costs, such as cost of goods, overhead, salaries, fees, etc.

Table 16: TYPE 2 DNE LIST EFFECT ON B-2-C NET REVENUE: FIXED GROSS REVENUE TARGETS

	Contacts	Gross Revenue	Marketing Cost*	Purchases	NET REVENUE
E-mail	22,269,211,250	**$28,504,590,400**	$2,004,229,013	220,465,191	$26,500,361,388
Postal Mail	7,216,352,000	**$28,504,590,400**	$3,968,993,600	116,183,267	$24,535,596,800
DIFFERENCE	**15,052,859,250**	**$0**	**$1,964,764,588**	**104,281,924**	**-$1,964,764,588**
% CHANGE	**-68%**	**0%**	**98%**	**-47%**	**-7.41%**

*Does NOT include other variable and fixed costs, such as cost of goods, overhead, salaries, fees, etc.

D. Estimated Impact On Small Business Efficiency Loss

As noted in the previous sub-section, however, the aggregate estimate of lost efficiency to the economy as a whole needs to be adjusted to take account of the special role played by e-mail marketing in the small business sector.

1. Dependence of Small Businesses on E-mail Marketing.

With the proliferation of Web sites, businesses have begun to pay for prominent placement of their information in search engine inquiries. Small- and medium-sized businesses are not prominent in Internet searches for products. Therefore, legitimate commercial e-mail marketing is a highly cost-effective alternative. Where sending prospecting letters via postal mail or hiring a sales force may cost thousands, even millions of dollars, e-mail may be sent for a fraction of the cost.

Not surprisingly then, industry research has for several years shown that within the large and rapidly growing legitimate commercial e-mail marketplace discussed in previous sections of this report, small businesses are especially reliant on e-mail marketing as one of the least expensive ways to acquire new customers and break into a marketplace dominated by large, traditional corporate entities.

The DMA routinely surveys its members to assess their usage of different marketing channels. In its most recent 2002 studies, it was found that some 28% of small businesses did NOT have an in-house e-mail list of customers –

A national "do not e-mail" registry that raised barriers to prospect email would therefore disproportionately affect small business.

they were about 50% more likely to lack such a customer base of e-mail contacts. This means that they are much more dependent than are large businesses on being able to e-mail to other people's customers, if they are to grow their enterprises. A national "do not e-mail" registry that raised barriers to prospect e-mail would therefore disproportionately affect small business.

… small enterprises [reported that] over 21% of their total Internet marketing budget was devoted to e-mail campaigns. This compares to some 13% for large businesses ...

Furthermore, small enterprises told our research department in 2002 that more than 21% of their total Internet marketing budget was devoted to e-mail campaigns. This compares to 13% for large businesses and only 6.2% for medium-sized businesses.

Table 17: PERCENTAGE OF E-MAIL IN TOTAL MARKETING BUDGET BY SIZE OF FIRM

	SMALL	MEDIUM	LARGE
Average	21.4%	6.2%	13.7%

(Source: 2002 DMA STATE OF E-COMMERCE INDUSTRY REPORT)

This reliance on e-mail marketing by small or start-up businesses correlates strongly with the respective sales performance over the Internet by small, medium, and large businesses. Whereas the industry-wide average is some 12.7% of Internet-based sales being derived from e-mail, small businesses derive almost twice as much -- 21.4% -- of their Internet-based revenues from e-mail promotions. And, as we have seen, a much larger proportion of such e-mail promotions from small businesses are likely to be to prospects rather than to established customers. Moreover, small businesses reported that 2002 e-mail-driven sales were increasing at a whopping 23% per year, at a time when the sales through other channels, or by other firms elsewhere in the economy, were either flat or growing slowly.

... small businesses reported that 2002 email-driven sales were increasing at a whopping 23% per year, at a time when the sales through other channels, or by other firms elsewhere in the economy, were either flat or growing slowly.

Table 18: PERCENTAGE OF E-MAIL SALES IN TOTAL INTERNET SALES BY SIZE OF FIRM

	SMALL	MEDIUM	LARGE	TOTAL
Average	21.4%	7.0%	13.4%	12.7%

(Source: 2002 DMA STATE OF E-COMMERCE INDUSTRY REPORT)

2. Impact of Loss of Marketing Efficiency: Small Firms

Given the heavy dependence on e-mail marketing to grow small businesses, we must adjust the global industry-wide figures that were calculated in sub-section C above to

account for the constraints on marketing budgets small businesses are likely to operate under.

In the adjusted calculations, illustrated in the following table, we assess the impact of a shift to the next most efficient marketing channel for firms with a fixed marketing budget. This is more typically the case for start-up firms with non-fungible resources and limited access to credit.

Here we estimate the size of the entire e-mail marketplace currently enjoyed by small businesses. Our same consumer survey indicates that about 24% of the industry-wide total is accounted for by purchases from small businesses.

Table 19: SHARE OF E-MAIL MARKETPLACE BY TYPE OF FIRM

	E-Mail Customers	
Total	100%	33,440,000
Customers Bought From... **...Company Not Previously Known**	19%	6,349,367
...Company No Previous Relationship	31%	10,370,633
...Small Company	24%	8,254,177

This allows us to adjust the global gross revenue (total sales) figure from $33.3 billion for the US economy as a whole to about $8 billion spent by consumers on purchases in response to legitimate commercial e-mail sent by small businesses, as shown in the next table:

Table 20: SMALL BUSINESS E-MAIL MARKETPLACE

	PURCHASERS (From Small Businesses)		
	All Purchasers	DNE Joiners	DNE Non-Joiners
US Adult population	**209,000,000**	**74%**	**26%**
Number of adults purchasing In Prior 12 months in response to legitimate commercial e-mail offer	**33,022,000**	**24,436,280**	**8,585,720**
Percentage buying from small business	**24%**		
Number of adults purchasing in prior 12 months in response to legitimate commercial e-mail from small business	**7,925,280**	**5,864,707**	**2,060,573**
Average cost (est. From most recent purchase)	**$158**		
Average # of purchases by type of e-mail	**6.4**		
Total # of purchases within prior 12 months in response to e-mail from small business	**50,721,792**	**37,534,126**	**13,187,666**
Total expenditures on purchases from small business by DNE list joiners and non-joiners	**$8,014,043,136**	**$5,930,391,921**	**$2,083,651,215**

When this adjustment is made, we can see that the impact on net revenue and growth is even more dramatic than it is for larger corporations. Currently, our calculations show that existing sales of $8.014 billion were likely realized on an e-mail marketing expenditure of approximately $563 million, for net revenue of $7.4 billion industry-wide for all small businesses, before other expenses such as cost of goods sold, wages and salaries, benefits, overhead, etc.

In the following table we assume that small businesses operate under budget constraints that preclude additional marketing expenditures, and thus have a fixed $563 million marketing expenditure. Assuming further that they experienced response rates consistent with industry norms as reported in the DMA *Response Rate Study,* this expenditure likely netted them about 61 million purchases over the course of the year.

However, if these small or start-up firms were forced by the imposition of a national DNE registry of Type 1 to forego the efficiencies of e-mail marketing altogether, the adoption of direct mail as the next most efficient marketing channel would be expected to result in only about $4,046,864,112 in gross revenue, or almost 50% less. This drop in gross revenue would translate into a 53% reduction in net revenue (down to $3,483,376,704 from $7,450,555,728) and some 73% fewer customers (16,494,813, a reduction of more than 45,488,802).

[For Small Business] ... the imposition of a national DNE registry ... would be expected to result ... into a 53% reduction in net revenue ... and some 73% fewer customers.

Table 21: TYPE 1 DNE LIST IMPACT ON SMALL BUSINESSES

	Contacts	Gross Revenue	Marketing Cost*	Purchases	NET REVENUE
E-mail	6,260,971,200	$8,014,043,136	$563,487,408	61,983,615	$7,450,555,728
Postal Mail	1,024,522,560	$4,046,864,112	$563,487,408	16,494,813	$3,483,376,704
DIFFERENCE	**-5,236,448,640**	**-$3,967,179,024**	**0**	**-45,488,802**	**-$3,967,179,024**
% CHANGE	**-84%**	**-49.5%**	**0%**	**-73%**	**-53%**

*Does NOT include other variable and fixed costs, such as cost of goods, overhead, salaries, fees, etc.

If, however, the federal government were to implement either of the Type 2 DNE registries, the negative impact would be somewhat less severe, though still fairly significant. The fixed marketing budget of $416 million expended to achieve $6.5 million in gross revenues that would be beyond reach even under a DNE list of Type 2 would have to be reallocated to the next most efficient channel, once again postal mail. This less efficient expenditure would yield $2.9 billion less in gross and net revenues, or a 50% reduction in the former and a 53% reduction in the latter. Just as significantly for future growth rates, this reduced efficiency in contact yields 73% fewer customers to these start-ups, or only 13 million purchasers over the course of a year, compared to the 50 million or more customers currently enjoyed under e-mail marketing without a DNE registry.

Table 22: TYPE 2 DNE LIST IMPACT ON SMALL BUSINESSES

	Contacts	Gross Revenue	Marketing Cost*	Purchases	NET REVENUE
E-mail	4,633,118,688	$5,930,391,921	$416,980,682	45,867,875	$5,513,411,239
Postal Mail	758,146,694	$2,994,679,443	$416,980,682	12,206,162	$2,577,698,761
DIFFERENCE	**-3,874,971,994**	**-$2,935,712,478**	**0**	**-33,661,713**	**-$2,935,712,478**
% CHANGE	**-84%**	**-50%**	**0%**	**-73%**	**-53%**

*Does NOT include other variable and fixed costs, such as cost of goods, overhead, salaries, fees, etc.

VI. ESTIMATED COMPLIANCE COSTS

It is not necessary to estimate compliance costs under DNE Type 1 regimes, since legitimate e-mail marketing will be non-existent (and spam will continue unabated). Under Type 2 regimes, however, the cost of compliance will probably depend both on the size of the registry once it is fully taken up by those who wish to do so, and by the pricing regime instituted by the federal government, about which we can make only educated guesses at this time.

The following table makes the following assumptions: that the FTC will be authorized to collect user fees from marketers who wish to send e-mail, and that such fees will be set high enough to at least recover the FTC's administration and enforcement costs. It also assumes that fees recovered from industry will be in proportion to the number of addresses placed on the registry.

Based on the precedent of the FTC's DNC registry, which has 55 million telephone numbers and currently authorized to recover $18 million from industry for its use, we may extrapolate the compliance fees to industry as a whole to be in the same proportion and the size of the two lists. In the case of the e-mail registry, the number we use is taken from our calculation based on 172 million potential e-mail addresses, or a multiplier of about 3.12 relative to the size of the DNC registry.

Thus, assuming a DNE fee price point adopted by Federal regulators proportional to the $18 million charged for the FTC's DNC registry, charges imposed on legitimate e-mail marketers could be in the order of $56 million. Of course, it is difficult to predict with any certainty what the compliance costs would actually be under any DNE registry until the government itself makes this determination.

Finally, however, it is important to bear in mind that, given the extremely low per contact cost for LCE marketing, virtually *any* usage fees imposed by the government would quickly make a DNE registry of Type 2 prohibitively expensive, in effect transforming it into a registry of Type 1. Such a development would be especially burdensome for small businesses and Internet start-ups, for whom the FTC usage fees would represent a de facto barrier to entry.

Table 23: ESTIMATED DNE COMPLIANCE COSTS

	SIZE	COST
TELEPHONE REGISTRY	55,000,000	$18,000,000
E-MAIL REGISTRY	172,000,000	$56,563,636

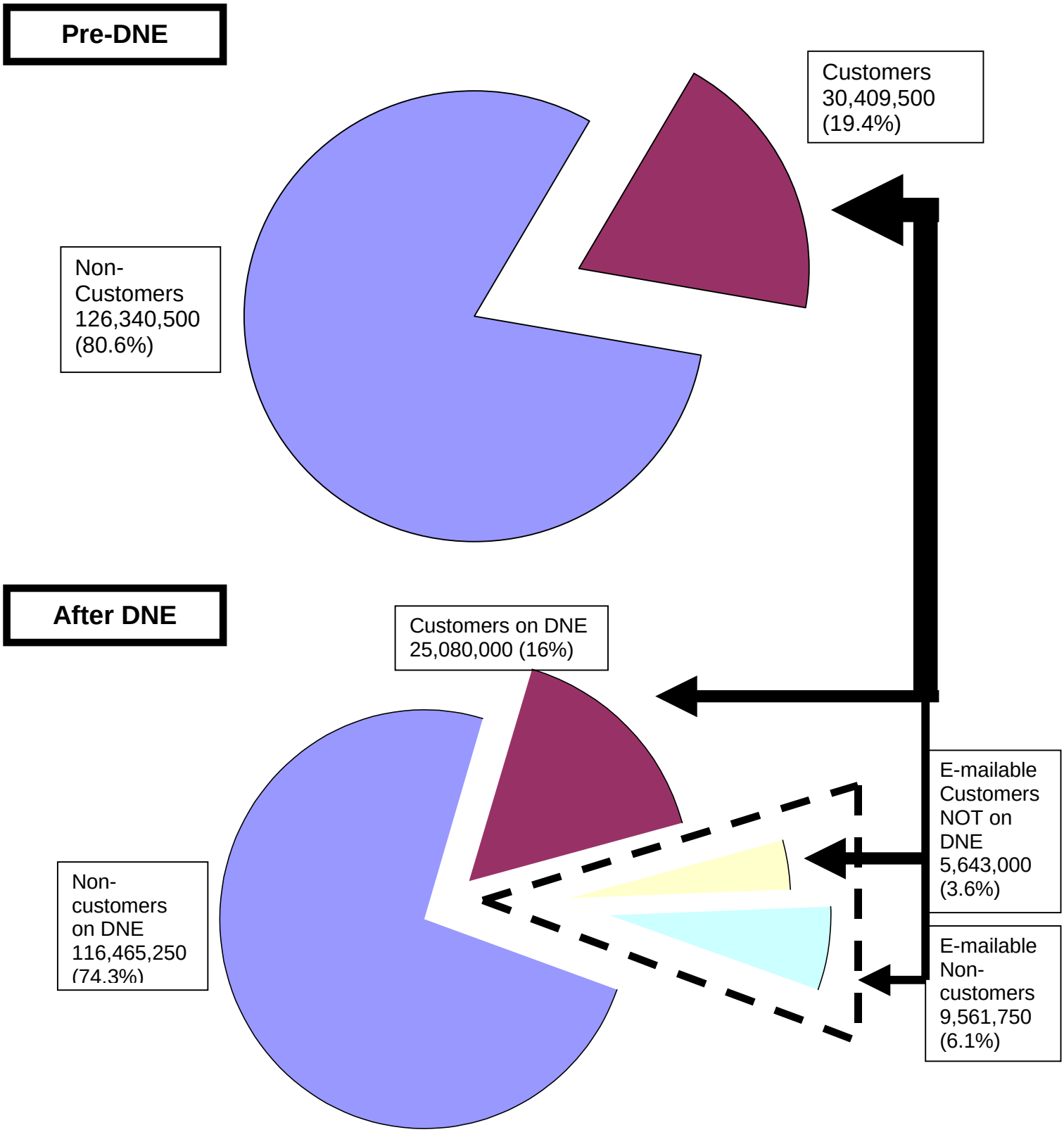
VII. CONCLUSION

Ultimately, the issue of the DNE registry is not just about current impact, but cumulative long-term opportunity costs as future growth opportunities are stifled.

There should be no doubt that businesses that depend on prospecting e-mail abhor the illegitimate, offensive, and deceptive spam that is now clogging inboxes. This type of e-mail is not what the vast majority of businesses do. This fraudulent spam is the bane of their existence. It clogs their servers as much as it clogs those of consumers. It destroys the willingness that consumers otherwise might have to open up an unexpected e-mail that might contain an attractive offer for a good or service from a company the consumer did not previously know about. The rising incidence of "false positives" reduces response rates for legitimate businesses and reduces the immediacy and efficiency all Americans have come to expect from one of the communication marvels of the new millennium.

Yet a DNE registry, of either type, is clearly not the sensible solution. A DNE registry would clearly harm the small entrepreneur, the consumer, and the US economy as a whole. Its costs are clear and large; its benefits are hard to identify and trivially small. Public support is far too uncertain, if not outright hostile, to countenance a DNE registry that would do nothing to secure compliance from illegitimate marketers while imposing a dead weight loss to the economy measurable in the billions of dollars.

CHART 1 - Impact of DNE on Number of Customers



NOTE: All Percentage Figures Refer to Percent of US Adult Internet Users